

REMARKS

Claims 19-34 are now pending in the application, with claims 19 and 25 being the independent claims. Reconsideration and further examination are respectfully requested.

In the Office Action, claims 1-18 were rejected under 35 USC § 102(e) over U.S. Patent 6,772,216 (Ankireddipally). Withdrawal of this rejection is respectfully requested for the following reasons.

In the above amendments, the claims have been rewritten to emphasize certain aspects of a conversation definition language or conversation controller according to the present invention. Those aspects are discussed and illustrated, e.g., from page 5 line 11 through page 9 line 19 and in Figure 1 of the Specification.

Conventionally, when a Web-based service and a client communicate with each other specific protocols must be observed by both parties. As a result, ad hoc communications are nearly impossible. In addition, even where the protocols have been specifically defined, permitting communication to occur, any desired changes or enhancements to the Web service typically require substantial recoding of both the server and the client logic.

One structural aspect of the present invention is the separation of logic flows (transitions) from the underlying functional units (transactions). As a result, for example, by discovering the transition structure utilized by a particular Web service (e.g., by learning what types of documents to the Web service expects and when), a client often will be able to begin an ad hoc conversation with that Web service. In addition, a particular conversation definition can be modified to accommodate new business processes, often without the need to modify any of the underlying code, e.g., by simply changing the defined transitions.

Still further, the present invention employs a set of transformations that often can further facilitate ad hoc communications by, e.g., automatically converting one type of document used by the client to another type of document used by the Web service. Such capability often can further free the software developers from having to worry about document mismatches. As long as the general type of document is the same (e.g., the necessary substantive information is included) and the specific document types are supported in the defined transactions or transformations, the two parties generally will be able to exchange documents on an ad hoc basis.

Finally, the separation of document type definitions, transactions, transition structure and transformations according to the present invention often can achieve the advantages described above in an efficient manner. For example, in representative embodiments a central library of transactions and/or transformations is maintained, used and reused by a variety of Web services, thereby creating uniformity, while at the same time providing developers with the ability to easily create and/or modify Web services.

Thus, independent claim 1 is directed to a computer language for defining a Web-based conversation that includes the following separately defined components: (a) a plurality of defined document type descriptions, each document type description specifying a type of document that can be used; (b) a set of defined interactions, each interaction specifying any expected inbound document types and any resulting outbound document types; (c) a set of transformations for use in connection with the defined interactions, each transformation specifying how to convert one document type to another document type, together with instructions for applying said transformations to compensate for mismatches between documents actually received and expected inbound document types; and (d) a transition structure that maps all permissible flows for a given conversation by identifying interactions

from the set of defined interactions and specifying transitions between the identified interactions.

Ankireddipally does not disclose or suggest any computer language which is structured as recited in independent claim 1. This structure was not as clearly recited in the claims as originally filed and therefore is not specifically addressed in the present Office Action. However, Ankireddipally has been studied in detail and is only seen to disclose a conventional structure (discussed above) in which each of the Web service server and the client must closely observe specific protocols in order for communication to occur. As a result, the technique of Ankireddipally lacks the flexibility and efficiencies of the present invention.

For these reasons, independent claim 1 is believed to be allowable over the applied art.

Independent claim 25 is directed to a conversation controller for controlling a conversation between a Web service and an external entity, including a communications interface for exchanging documents with a Web service and an external entity. In addition, the controller includes the following separately defined components: (i) a plurality of defined document type descriptions, each document type description specifying a type of document that can be used; (ii) a set of defined interactions, each interaction specifying any expected inbound document types and any resulting outbound document types; (iii) a transition structure that maps all permissible flows for a given conversation by identifying interactions from the set of defined interactions and specifying transitions between the identified interactions; and (iv) a set of transformations, each transformation specifying how to convert one document type to another document type. A control processor is used for exchanging documents with the Web service and with the external entity through the communications interface in accordance with the transition structure. A transformation component maps

document types using the set of transformations to compensate for mismatches between documents actually received from the external entity and expected inbound document types.

For reasons similar to those set forth above, Ankireddipally fails to disclose or to suggest a conversation controller having a structure as recited above. Accordingly, independent claim 25 also is believed to be allowable over the applied art.

The other claims in the application depend from these independent claims and are therefore believed to be allowable for at least the same reasons. In addition, each dependent claim recites an additional feature of the invention that further distinguishes the invention from the applied art. Accordingly, the individual consideration of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, the entire application is believed to being conditioned for allowance, and an indication to the effect is respectfully requested.

If there are any fees due in connection with the filing of this paper that have not been accounted for in this paper or the accompanying papers, please charge the fees to Deposit Account No. 08-2025. If an extension of time under 37 C.F.R. 1.136 is required for the filing of this paper and is not accounted for in this paper or the accompanying papers, such an extension is requested and the fee (or any underpayment thereof) should also be charged to Deposit Account No. 08-2025. A duplicate copy of this page is enclosed for that purpose.

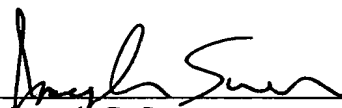
Respectfully submitted,

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